

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A shelf stacking machine for storing and retrieving paper reels, which is movable in an aisle between storage positions on both sides that hold paper reels stored above one another and spaced apart in the longitudinal direction of the aisle, and has a fork for carrying paper reels,

characterized in that said fork (1) is vertically pivotable around a horizontal axis (6) and comprises at least one measuring device (7) that detects the carrying load of a picked-up paper reel (P), said machine further comprising an actuator (8) coupled to said at least one measuring device to receive control data based on detected measuring data indicating the load carried by said fork, said actuator (8) being coupled to said fork (1) to vertically pivot said fork (1) into a horizontal position in accordance with the measuring data and to hold said fork in this horizontal position during transport of the paper reel.

2. (Previously presented)) A shelf stacking machine according to claim 1, characterized in that said fork is composed of two fork pieces (1a) and two ultrasound sensors are disposed as measuring devices (7) in at least one of the two fork pieces (1a) of the fork (1).

3. (Previously presented) A shelf stacking machine according to claim 1, characterized in that the fork (1) is provided with prism shaped or circular-arc shaped fork sections (a, b, c) for various diameters of the paper reels (P).

4. (Previously presented) A shelf stacking machine according to claim 1, characterized in that the fork (1) is fixed on a vertical fork frame (9) that is supported with its upper end in the horizontal axis (6) and actuated by the actuator (8) to pivot the fork vertically.

5. (Previously presented) A shelf stacking machine according to claim 1, characterized in that the fork (1) is suspended with a rotating ring (10) from a lift and drive unit formed by a lifting gear frame (11) and a drive frame (12).

6. (Previously prseented) A shelf stacking machine according to claim 4, characterized in that the fork (1) is suspended

with a rotating ring (10) from a lift and drive unit formed by a lifting gear frame (11) and a drive frame (12), the fork frame (9) is supported at the horizontal axis (6) on a fork framework (13), said fork framework (13) is fixed at its upper end on the rotating ring (10), and the rotating ring (10) is moveable with a moving device (14a) on the drive frame (12) for storing and removing reels.

7. (Previously presented) A shelf stacking machine according to claim 6, characterized in that the actuator (8), which acts onto the fork frame (9) with a lifting element (8a) that can be moved to and fro, is fixed on the fork framework (13).

8. (Previously presented) A shelf stacking machine according to claim 5, characterized in that the drive frame (12) is held on the lifting gear frame (11) at both ends and the lifting gear frame (11) is supported vertically adjustable with rollers (11a) on a stand (2) of the shelf stacking machine.

9. (Previously presented) A shelf stacking machine according to claim 8, characterized in that the stand (2) of the shelf stacking machine is formed U-shaped and includes two vertical posts (2a), that the stand (2) with said vertical posts stands on motor driven moving devices (3), that said lifting gear

frame (11) and said drive frame (12) lie between said posts (2a) of said stand (2), and that the lifting gear frame (11) is guided with said rollers (11a) vertically adjustable on said posts (2a).

10. (Previously presented) A shelf stacking machine according to claim 9, characterized in that said stand (2) is or can be coupled to a transport vehicle (TW) that moves the shelf stacking machine out of the aisle (G).

11. (Previously presented) A shelf stacking machine according to claim 10, characterized in that one horizontal axis pin (14) is disposed in each of said two posts (2a) of said shelf stacking machine stand (2), that both pins (14) are situated coaxially opposite one another and are grasped by the transport vehicle (TW) for pivoting of said stand from a vertical position into an inclined position.

12. (Previously presented) A shelf stacking machine according to claim 10, characterized in that the shelf stacking machine is movable on a drive rail, the transport vehicle (TW) incorporates vertically adjustable lifting elements (15) with support rollers (16) to raise the shelf

stacking machine out of the drive rail (5) on a warehouse floor or in a pit.

13. (Previously presented) A shelf stacking machine according to claim 12, characterized in that the lifting elements (15) of the transport vehicle (TW) are vertically adjustable by means of support rollers, either mechanically, electric motor driven, or hydraulically.

14. (Previously presented) A shelf stacking machine according to claim 12, characterized in that a cross connection (17) is disposed between the posts (20) of the stand (2) of the shelf stacking machine with a clearance channel (17a) that is pulled down to the warehouse floor (B) for picking up a paper reel (P) from the floor with the fork (1).

15-16. (Canceled).